Netherlands Journal of Agricultural Science

Volume 38 (1990)

Subject index

This index lists the keywords given in the headings of the papers. A number refers to the first page of the paper involved.

acetonaemia 527,541
acid(s)
–, amino 623
–, butyric 423
– digestibility, amino 577
– requirements, amino 577
–, amino 623
–, synthetic amino 577
–, volatile fatty 353
adaptation 697
aerial photography, multispectral 653
aggregates 175
agricultural
– research institutes 697
– technology 697
air convection, intergranular 195
airflow measuring, ultra-low 195
alkaline phosphatase 555
alkalinity 353
amino acid(s) 623
– digestibility 577
– requirements 577
–, synthetic 577
ammonia volatilization 145, 239
ammonium-N 423
analysis 353
–, canonical correspondence 303
–, canonical discriminant 303
–, cluster 303
animal manure 333, 353
anthropology, sociology and 697
arable land 145, 239
Asia 661
assimilation, canopy 53
atmospheric deposition 369
bacteria 283
–, rhizosphere 255
barley 317
bean(s) 317
–, faba 21, 131
beet
–, pulp 77
– pulp, pressed 77
–, sugar 317, 731
best linear prediction 449
biomass 283
–, microbial 265
blood parameters 541
bone 555
Bowen ratio 117
Brassica oleracea L. var. *botrytis* 641
bulk grain moisture 195
butyric acid 423
C-t-gastrin-immunoreactive cell 67
cadmium 369, 381
calibration 449
canonical correspondence analysis 303
canonical discriminant analysis 303
canopy assimilation 53
carbohydrates 475, 487, 499, 513
carbon 283
carbon dioxide 661
carrot 369
cassava 159
cations 353
cattle
–, dairy 89
– slurry 145, 239
cauliflower 641
cell
–, C-t-gastrin-immunoreactive 67
– walls 513
– wall constituents 1
chemical
– composition 407
– model 333
Clarias gariepinus 67
clay soils 175
climate change 661
clostridia 423

Netherlands Journal of Agricultural Science

Volume 38 (1990)

Subject index

This index lists the keywords given in the headings of the papers. A number refers to the first page of the paper involved.

acetonaemia 527,541
acid(s)
–, amino 623
–, butyric 423
– digestibility, amino 577
– requirements, amino 577
–, amino 623
–, synthetic amino 577
–, volatile fatty 353
adaptation 697
aerial photography, multispectral 653
aggregates 175
agricultural
– research institutes 697
– technology 697
air convection, intergranular 195
airflow measuring, ultra-low 195
alkaline phosphatase 555
alkalinity 353
amino acid(s) 623
– digestibility 577
– requirements 577
–, synthetic 577
ammonia volatilization 145, 239
ammonium-N 423
analysis 353
–, canonical correspondence 303
–, canonical discriminant 303
–, cluster 303
animal manure 333, 353
anthropology, sociology and 697
arable land 145, 239
Asia 661
assimilation, canopy 53
atmospheric deposition 369
bacteria 283
–, rhizosphere 255
barley 317
bean(s) 317
–, faba 21, 131
beet
–, pulp 77
– pulp, pressed 77
–, sugar 317, 731
best linear prediction 449
biomass 283
–, microbial 265
blood parameters 541
bone 555
Bowen ratio 117
Brassica oleracea L. var. *botrytis* 641
bulk grain moisture 195
butyric acid 423
C-t-gastrin-immunoreactive cell 67
cadmium 369, 381
calibration 449
canonical correspondence analysis 303
canonical discriminant analysis 303
canopy assimilation 53
carbohydrates 475, 487, 499, 513
carbon 283
carbon dioxide 661
carrot 369
cassava 159
cations 353
cattle
–, dairy 89
– slurry 145, 239
cauliflower 641
cell
–, C-t-gastrin-immunoreactive 67
– walls 513
– wall constituents 1
chemical
– composition 407
– model 333
Clarias gariepinus 67
clay soils 175
climate change 661
clostridia 423

cluster analysis 303
COLE 175
collembola 283
competition 711
concentrates supply 541
contamination, microbial 719
conventional management 283
correspondence analysis, canonical 303
cow(s) 77
–, dairy 461, 475, 487
creatine kinase 737
crop growth 661
cropping system 711
culling 201
cycle 45
cystine, methionine + 577
dairy
– cattle 89
– cows 461, 475, 487
degradability, protein 527
degradation
–, in sacco 499
–, protein 719
denitrification 265
deposition, atmospheric 369
dew 117
– profile 117
dewfall 117
dewrise 117
diffusivity,soil 117
digestibility 77, 407, 435, 475, 555, 567, 597, 681
–, amino acid 577
–, ileal 609
digestible organic matter 449
digestive tract 67
discriminant analysis, canonical 303
double sampling 743
Douglas fir 53
dry matter
– distribution 95, 159
– intake 527
– partitioning 21
– production 159
drying 175
dystrophy, muscular 737
early immobilization 737
econimic(s) 201
– losses 89
energy 527
– status 541
enzyme treatment 407
equation(s) 435
equation, Penman's 725
evaporation
–, lake 725
–, shaded Piche 725
ewe 527, 541
faba beans 21, 131
farmers/indigenous knowledge 697
fatty acids, volatile 353
feather meal 681
feed
– intake 1
– phosphates 555
feeding
–, flat level 461
– level 67
– strategy 461, 527
feedstuffs 567
fermentation, rumen 513
fertilization, nitrogen 255
field measurement 145
fish meal 461
flat level feeding 461
floodplains 381
flower initiation 641
fluorescent pseudomonads 255
flux rates, nitrogen 303
food webs 303
forest
– growth 53
– inventory 743
fungi 283
generalized least squares 449
gibberellin 641
grain
– damage prevention 195
– moisture, bulk 195
– storage 195
grass 369
– silage 407
– silage, wilted 423
grass-herb vegetations 407
gross photosynthesis 95
growth rate
–, postheading 109
–, preheading 109
growth respiration 95
harvest
– index 109
– planning 641
heavy metals 369, 381
herbage 475
herbicides 711
Hordeum vulgare L. 109
hormones 67
horses 435
ileal digestibility 609
ideal protein 609
immobilization

– , N 265
– , early 737
immunohistochemistry 67
in sacco degradation 499
in situ measurement 719
incorporation 145, 239
indigenous knowledge, farmers/ 697
infrared spectroscopy, near 449
insemination 201
intake 77, 487
– , dry matter 527
– , feed 1
integrated management 283
intergranular air convection 195
irrigation 21
LAI 53
lake evaporation 725
land, arable 145, 239
lead 369
leaf area 109
least squares, generalized 449
least squares, partial 449
Leick plates 117
linear prediction, best 449
linear regression, multiple 449
liquid fraction 353
litter size 527, 541
local volume table 743
lysine 609
maintenance respiration 95
maize 117, 317
– silage 77
manure, animal 333, 353
mastitis 89
mercury 381
metals, heavy 369, 381
methionine + cystine 577
microbial
– biomass 265
– contamination 719
micropollutants, organic 381
milk production 77, 475, 487
mineralization 221
– , N 265
minerals 333
mites 283
model 221
– , chemical 333
– , simulation 201
– , simulation 9
– , simulation 711
– , transfer 239
– , yield-forecasting 731
mouse 737
Mozambique 9
multiple linear regression 449
multispectral aerial photography 653
muscular dystrophy 737
N
– balance 265
– cycling 265
– immobilization 265
– mineralization 265
nematodes 283
near infrared spectroscopy 449
needle
– distribution 53
– longivity 53
net photosynthesis 95
nitrogen 283, 499
– fertilization 255
– flux rates 303
nutrients 353
onion 317
optimization 9
organic matter 435
– , digestible 449
– , soil 221
organic micropollutants 381
Oryza sativa L. 661
partial least squares 449
particle pools 1
partitioning, dry matter 21
passage rate 1
PCB's 381
Penman's equation 725
pharmacokinetics 623
phosphatase, alkaline 555
phosphate(s) 333
– adsorption 317
– , feed 555
phosphorus 555, 567
– availability 317
photosynthesis
– , gross 95
– , net 95
phytase 567
phytate 567
Piche evaporation, shaded 725
pig(s) 45, 567, 577, 597, 609, 623
piglets 555
plasma 555, 623
PLE 175
pod
– filling 131
– retention 131
postheading growth rate 109
potato 317
prediction(s) 435
– , best linear 449

pregnancy 45, 527, 541
preheading growth rate 109
pressed beet pulp 77
primary production 53
principal components regression 449
progesterone 45
protection 221
protein 513
– degradability 527
– degradation 719
–, ideal 609
– quality 681
protozoa 283
pseudomonads, fluorescent 255
quality 641
–, protein 681
radiation 661
– use efficiency 731
regression
–, multiple linear 449
–, principal components 449
–, weighted 743
remote sensing 653
rendering 681
requirement(s) 597, 609
–, amino acid 577
respiration 95
–, growth 95
–, maintenance 95
Rhine 381
rhizosphere bacteria 255
root area index 317
root length density 317
rumen availability 499
rumen fermentation 513
ruminants 1
rumination 1
sampling, double 743
seed yield 21
shaded Piche evaporation 725
shrinkage 175
silage
–, grass 407
–, maize 77
–, wilted grass 423
simulation 159, 661
simulation model 9, 201, 711
slurry, cattle 145, 239
sociology and anthropology 697
soil(s) 283
– diffusivity 117
– organic matter 221
–, clay 175
sowing strategies 9
sows 201
speciation 333
spectroscopy, near infrared 449
spinach 369
spores 423
standard volume table 743
starch 513
sugar beet 317, 731
supplementation 475
surface application 145, 239
swelling 175
synthetic amino acids 577
technology, agricultural 697
temperature 661
thermal processing 681
threonine 577, 597, 609
transfer model 239
tryptophan 577
ultra-low airflow measuring 195
vegetations, grass-herb 407
Vicia faba L. 21, 131
volatile fatty acids 353
volatilization, ammonia 145, 239
volume table, local 743
volume table, standard 743
washing procedure 719
water supply 131
weeds 711
weighted regression 743
wheat 255, 317, 369
–, winter 711
wilted grass silage 423
winter wheat 711
yield 641
– estimation 653
–, seed 21
– variability 21, 131
yield-forecasting model 731
Zea mays L. 95, 653

Author index

Abdulai, B. I., C. J. Stigter, A. A. Ibrahim, A. M. Adeeb & H. S. Adam, Evaporation calculations for Lake Sennar (Sudan): a search for a meteorological minimum input approach for shallow lakes 725
Adam, H. S., see Abdulai, B. I. 725
Adeeb, A. M., see Abdulai, B. I. 725
Atzema, A. J., A. F. G. Jacobs & L. Wartena, Moisture distribution within a maize crop due to dew 117
Bakker, J. G. M., see Fentener van Vlissingen, J. M. 623
Bangma, G. A., see Bruchem, J. van 1
Bartelink, H. H., see Mohren, G. M. J. 53
Beers, S., see Dellaert, B. M. 555
Beljaars, A. C. M., see Molen, J. van der 239
Boekholt, H. A., see Roodenburg, A. J. C. 737
Booij, R., Effects of gibberellic acids on time of maturity and on yield and quality of cauliflower 641
Booms, G. H. R., see Boon, J. H. 67
Boon, J. H., J. H. W. M. Rombouts, G. H. R. Booms & M. A. M. Machiels, Influence of feeding level on the population of C-terminal-gastrin-immunoreactive cells in the digestive tract of young *Clarias gariepinus* (Burchell 1822) 67
Bosch, M. W., see Schutte, J. B. 597
Bouwman, L. A, see Brussaard, L. 283
Box, L., see Dusseldorp, D. B. W. M. van 697
Bril, J. & W. Salomons, Chemical composition of animal manure: a modelling approach 333
Brinkman, M. A., see Salman, A. A 109
Bronswijk, J. J. B. & J. J. Evers-Vermeer, Shrinkage of Dutch clay soil aggregates 175
Bruchem, J. van, F. Kamphuis, I. Janssen, S. C. W. Lammers-Wienhoven, G. A. Bangma & J. van den Hoek, Tritiated hay and chromium-mordanted neutral-detergent fibre as particulate markers for digesta kinetics in the reticulo-rumen 1
Bruijn, G. H. de, see Gijzen, H. 159
Brussaard, L., L. A. Bouwman, M. Geurs, J. Hassink & K. B. Zwart, Biomass, composition and temporal dynamics of soil organisms of a silt loam soil under conventional and integrated management 283
Chardon, W. J., see Molen, J. van der 145
Chardon, W. J., see Molen, J. van der 239
Chardon, W. J., see Noordwijk, M. van 317
Clevers, J. G. P. W. & L. Sibma, Estimation of dry matter yield of silage maize by means of multispectral aerial photography 653
Dalenberg, J. W. & W. van Driel, Contribution of atmospheric deposition to heavy-metal concentrations in field crops 369
Dellaert, B. M., G. F. V. van der Peet, A. W. Jongbloed & S. Beers, A comparison of different techniques to assess the biological availability of feed phosphates in pig feeding 555
Diepen, J. Th. M. van, see Lenis, N. P. 577
Diepen, J. Th. M. van, see Lenis, N. P. 609
Diepen, J. Th. M. van, see Schutte, J. B. 597
Dijk, J. E. van, see Fentener van Vlissingen, J. M. 623
Dijkhuizen, A. A., see Houben, E. H. P. 201
Dijkhuizen, A. A., see Schakenraad, M. H. W. 89
Driel, W. van, see Dalenberg, J. W. 369
Dusseldorp, D. B. W. M. van & L. Box, Role of sociologists and cultural anthropologists in the development, adaptation and transfer of new agricultural technologies 697
Ehlert, P. A. I., see Noordwijk, M. van 317

El Boushy, A. R., see Poel, A. F. B. van der 681
Evers-Vermeer, J. J., see Bronswijk, J. J. B. 175
Everts, H., Feeding strategy during pregnancy for ewes with a large litter size. 1. Effect of quantity and composition of concentrates on intake and reproductive performance 527
Everts, H., Feeding strategy during pregnancy for ewes with a large litter size. 2. Effect on blood parameters and energy status 541
Faassen, H.G. van & G. Lebbink, Nitrogen cycling in high-input versus reduced-input arable farming 265
Faassen, H. G. van, see Molen, J. van der 145
Faassen, H. G. van, see Molen, J. van der 239
Fentener van Vlissingen, J. M., J. G. M. Bakker, L. P. Jager, N. P. Lenis, H. de Visser, F. G. M. Russel & J. E. van Dijk, Kinetics of plasma lysine after oral and parenteral administration to pigs 623
Geurs, M., see Brussaard, L. 283
Gijzen, H., H. J. Veltkamp, J. Goudriaan & G. H. de Bruijn, Simulation of dry matter production and distribution in cassava (*Manihot esculenta* Crantz) 159
Goedhart, P. W., Comparison of multivariate calibration methods for prediction of feeding value by near infrared reflectance spectroscopy 449
Goedhart, P. W., see Lenis, N. P. 577
Goedhart, P. W., see Rijpkema, Y. S. 461
Goudriaan, J., see Gijzen, H. 159
Gough, M. C., see Uiso, C. B. S. 195
Grashoff, C., Effect of pattern of water supply on *Vicia faba* L. 1. Dry matter partitioning and yield variability 21
Grashoff, C., Effect of pattern of water supply on *Vicia faba* L. 2. Pod retention and filling, and dry matter partitioning, production and water use 131
Groeneveld, R. M. W., see Lotz, L. A. P. 711
Groot, A. J. de, see Japenga, J. 381
Groot, J. J. R., see Verberne, E. L. J. 221
Harmsen, K., The Institute for Soil Fertility Research 1890-1990 205
Harmsen, K., see Japenga, J. 353
Hassink, J., see Brussaard, L. 283
Hassink, J., see Verberne, E. L. J. 221
Helmond, F. A., see Meulen, J. van der 45
Hindle, V. A., see Smolders, E. A. A. 435
Hindle, V. A., see Steg, A. 407
Hindle, V. A., see Visser, H. de 77
Hoek, J. van den, see Bruchem, J. van 1
Hof, G., W. J. A. Kouwenberg & S. Tamminga, The effect of washing procedure on the estimation of the in situ disappearance of amino acids from feed protein 719
Honing, Y. van der & S. J. Langelaar, Contribution to animal nutrition in the Netherlands by the Research Institute for Livestock Feeding and Nutrition, since 1890 399
Houben, E. H. P., J. G. M. Thelosen, R. B. M. Huirne & A. A. Dijkhuizen, Economic comparison of insemination and culling policies in commercial sow herds, assessed by stochastic simulation 201
Huirne, R. B. M., see Houben, E. H. P. 201
Ibrahim, A. A., see Abdulai, B. I. 725
Jacobs, A. F. G., see Atzema, A. J. 117
Jager, L. P., see Fentener van Vlissingen, J. M. 623
Jansen, D. M., Potential rice yields in future weather conditions in different parts of Asia 661
Jansen, J. J., The precision in estimating the stem volume in Smilde forest management unit 743
Janssen, I., see Bruchem, J. van 1
Japenga, J. & K. Harmsen, Determination of mass balances and ionic balances in animal manure 353
Japenga, J., K. H. Zschuppe, A. J. de Groot & W. Salomons, Heavy metals and organic micropollutants in floodplains of the river Waal, a distributary of the river Rhine, 1958-1981 381

Jong, J. de, see Schutte, J. B. 597
Jongbloed, A. W. & P. A. Kemme, Apparent digestible phosphorus in the feeding of pigs in relation to availability, requirement and environment. 1. Digestible phosphorus in feedstuffs from plant and animal origin 567
Jongbloed, A. W., see Dellaert, B. M. 555
Jury, W. A., see Molen, J. van der 239
Kamphuis, F., dee Bruchem, J. van 1
Kemme, P. A., see Jongbloed, A. W. 567
Ketelaar, R. S., see Tamminga, S. 513
Ketelaar, R. S., see Vuuren, A. M. van 499
Kiewiet, B. see Spitters, C. J. T. 731
Kleef, J. van, see Louwerse, W. 95
Klein Poelhuis, H. W., see Valk, H. 475
Koelen, C. J. van der, see Tamminga, S. 513
Koopmanschap, R. E., see Roodenburg, A. J. C. 737
Kouwenberg, W. J. A., see Hof, G. 719
Kropff, M. J., see Lotz, L. A. P. 711
Lammers-Wienhoven, S. C. W., see Bruchem, J. van 1
Langelaar, S. J., see Honing, Y. van der 399
Lebbink, G., see Faassen, H. G. van 265
Leclerc, M. Y., see Molen, J. van der 145
Lenis, N. P., J. Th. M. van Diepen & P. W. Goedhart, Amino acid requirements of pigs. 1. Requirements for methionine + cystine, threonine and tryptophan of fast-growing boars and gilts, fed ad libitum 577
Lenis, N. P. & J. Th. M. van Diepen, Amino acid requirements of pigs. 3. Requirement for apparent digestible threonine of pigs in different stages of growth 609
Lenis, N. P., see Fentener van Vlissingen, J. M. 623
Lenis, N. P., see Schutte, J. B. 597
Liljeroth, E., G. C. Schelling & J. A. van Veen, Influence of different application rates of nitrogen to soil on rhizosphere bacteria 255
Lotz, L. A. P., M. J. Kropff & R. M. W. Groeneveld, Modelling weed competition and yield losses to study the effect of omission of herbicides in winter wheat 711
Louwerse, W., L. Sibma & J. van Kleef, Crop photosynthesis, respiration and dry matter production of maize 95
Machiels, M. A. M., see Boon, J. H. 67
Meer, J. M. van der, see Steg, A. 407
Meulen, J. van der, F. A. Helmond & C. P. J. Oudenaarden, Corpus luteum function in the pig: progesterone profiles of cyclic and pregnant gilts 45
Mohren, G. M. J. & H. H. Bartelink, Modelling the effects of needle mortality rate and needle area distribution on dry matter production of Douglas fir 53
Molen, J. van der, H. G. van Faassen, M. Y. Leclerc, R. Vriesema & W. J. Chardon, Ammonia volatilization from arable land after application of cattle slurry. 1. Field estimates 145
Molen, J. van der, A. C. M. Beljaars, W. J. Chardon, W. A. Jury & H. G. van Faassen, Ammonia volatilization from arable land after application of cattle slurry. 2. Derivation of a transfer model 239
Moore, J. C., H. J. C. Zwetsloot & P. C. de Ruiter, Statistical analysis and simulation modelling of the belowground food webs of two winter wheat management practices 303
Noordwijk, M. van, P. de Willigen, P. A. I. Ehlert & W. J. Chardon, A simple model of P uptake by crops as a possible basis for P fertilizer recommendations 317
Oudenaarden, C. P. J., see Meulen, J. van der 45
Peet, G. F. V. van der, see Dellaert, B.M. 555
Pelgrum, G. H., see Schouwenaars, J. M. 9
Poel, A. F. B. van der & A. R. El Boushy, Processing methods for feather meal and aspects of quality 681
Reeuwijk, L. van, see Rijpkema, Y. S. 461

Rijpkema, Y. S., L. van Reeuwijk & P. W. Goedhart, Effects of pattern of concentrate feeding on milk production of dairy cows offered silage ad libitum 461
Rombouts, J. H. W. M., see Boon, J. H. 67
Roodenburg, A. J. C., V. V. A. M. Schreurs, R. E. Koopmanschap & H. A. Boekholt, Activity of sarcoplasmic and mitochondrial creatine kinase in mouse muscular dystrophy: effect of early immobilization 737
Ruiter, P. C. de, see Moore, J. C. 303
Russel, F. G. M., see Fentener van Vlissingen, J. M. 623
Salman, A. A. & M. A. Brinkman, Pre- and postheading growth rate and its association with grain yield in barley 109
Salomons, W., see Bril, J. 333
Salomons, W., see Japenga, J. 381
Schakenraad, M. H. W. & A. A. Dijkhuizen, Economic losses due to bovine mastitis in Dutch dairy herds 89
Schelling, G. C., see Liljeroth, E. 255
Schiphouwer, T., see Spitters, C. J. T. 731
Schouwenaars, J. M. & G. H. Pelgrum, A model approach to analyse sowing strategies for maize in southern Mozambique 9
Schreurs, V. V. A. M., see Roodenburg, A. J. C. 737
Schutte, J. B., M. W. Bosch, N. P. Lenis, J. de Jong & J. Th. M. van Diepen, Amino acid requirements of pigs. 2. Requirement for apparent digestible threonine of young pigs 597
Sibma, L., see Clevers, J. G. P. W. 653
Sibma, L., see Louwerse, W. 95
Smolders, E. A. A., A. Steg & V. A. Hindle, Organic matter digestibility in horses and its prediction 435
Spitters, C. J. T., B. Kiewiet & T. Schiphouwer, A weather-based yield-forecasting model for sugar beet 731
Spoelstra, S. F., Comparison of the content of clostridial spores in wilted grass silage ensiled in either laboratory, pilot-scale or farm silos 423
Spoelstra, S. F., see Steg, A. 407
Steg, A., S. F., Spoelstra, J. M. van der Meer & V. A. Hindle, Digestibility of grass silage 407
Steg, A., see Smolders, E. A. A. 435
Stigter, C. J., see Abdulai, B. I. 725
Stigter, C. J., see Uiso, C. B. S. 195
Tamminga, S., A. M. van Vuuren, C. J. van der Koelen, R. S. Ketelaar & P. L. van der Togt, Ruminal behaviour of structural carbohydrates, non-structural carbohydrates and crude protein from concentrate ingredients in dairy cows 513
Tamminga, S., see Hof, G. 719
Tamminga, S., see Visser, H. de 487
Tamminga, S., see Vuuren, A. M. van 499
Thelosen, J. G. M., see Houben, E. H. P. 201
Togt, P. L. van der, see Tamminga, S. 513
Togt, P. L. van der, see Visser, H. de 487
Uiso, C. B. S., M. C. Gough & C. J. Stigter, Detection, causes and consequences of convection currents in bulk-stored grain 195
Valk, H., H. W. Klein Poelhuis & H. J. Wentink, Effect of fibrous and starchy carbohydrates in concentrates as supplements in a herbage-based diet for high-yielding dairy cows 475
Veen, J. A. van, see Liljeroth, E. 255
Veen, J. A. van, see Verberne, E. L. J. 221
Veltkamp, H. J., see Gijzen, H. 159
Verberne, E. L. J., J. Hassink, P. de Willigen, J. J. R. Groot & J. A. van Veen, Modelling organic matter dynamics in different soils 221
Visser, H. de, P. L. van der Togt & S. Tamminga, Structural and non-structural carbohydrates in concentrate supplements of sulage-based dairy cow rations. 1. Feed intake and milk production 487

Visser, H. de & V. A. Hindle, Dried beet pulp, pressed beet pulp and maize silage as substitutes for concentrates in dairy cow rations. 1. Feeding value, feed intake, milk production and milk composition 77
Visser, H. de, see Fentener van Vlissingen, J. M. 623
Vriesema, R., see Molen, J. van der 145
Vuuren, A. M. van, S. Tamminga & R. S. Ketelaar, Ruminal availability of nitrogen and carbohydrates from fresh and preserved herbage in dairy cows 499
Vuuren, A. M. van, see Tamminga, S. 513
Wartena, L., see Atzema, A. J. 117
Wentink, H. J., see Valk, H. 475
Willigen, P. de, see Noordwijk, M. van 317
Willigen, P. de, see Verberne, E. L. J. 221
Zschuppe, K. H., see Japenga, J. 381
Zwart, K. B., see Brussaard, L. 283
Zwetsloot, H. J. C., see Moore, J. C. 303

Miscellany

In memoriam Dr Ir C. J. T. Spitters 93

Erratum: Ende, J. van den, 1989. Estimating the chemical composition of the soil solution of glasshouse soil. 2. Relationships between the composition of soil solution and aqueous extracts. *Netherlands Journal of Agricultural Science* 37: 323-334 749

Erratum: Gijzen, H., H. J. Veltkamp, J. Goudriaan & G. H. de Bruijn. Simulation of dry matter production and distribution in cassava (*Manihot esculenta* Crantz). *Netherlands Journal of Agricultural Science* 38: 159-173 749

Subject index to Volume 38 (1990) 750
Author index to Volume 38 (1990) 754